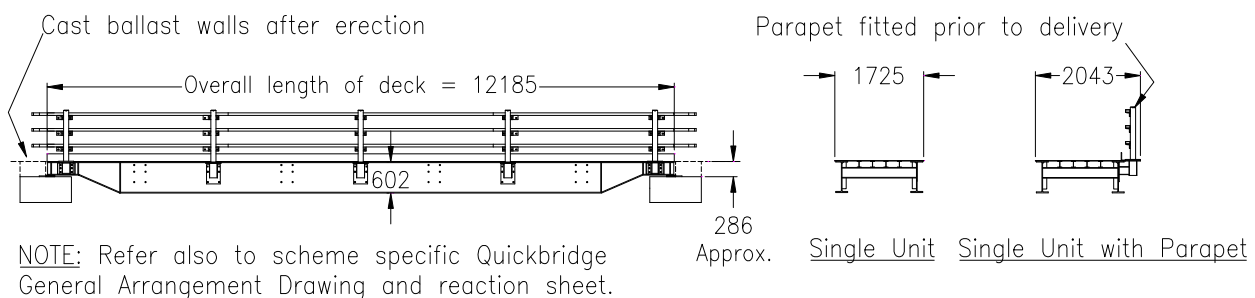


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Erection Guide for 12m Flat Top Quickbridging (TYPE: QB8, QB9, QB10)

(Refer to alternative guides for type NQB012 Quickbridge)

This guidance note is intended to give guidelines to hirers for the erection and use of Mabey Hire Ltd. Quickbridges. It is not intended to replace the responsibility of the Hirer to produce a safe system of work specific to his own application. The erection of the bridge should be carried out by labour experienced with the use of cranes and slinging, under the supervision of a suitably qualified and experienced person to be known as the construction supervisor.



1. CHECKS PRIOR TO DELIVERY OF THE QUICKBRIDGES

Checks before arrival on site of labour and materials: -

- Are the vehicle/pedestrian loadings clearly defined?
- Is the span correct with sufficient clearance for the obstacle crossed?
- Check ground conditions for foundation design.
- Are access conditions suitable for crane and delivery vehicles?
- Check area is free of overhead cables and other obstructions.
- Check Radius and weight of lift. (refer to section 5)
- Are ground conditions sufficient for rigger pad loads?
- Is there sufficient area to store materials (if necessary) and stand crane.
- Notification and agreement of any road closures or rail possessions.

2. RESOURCES TO BE PROVIDED BY THE HIRER

The responsibility for the following rests with the Hirer: -

- A safe system of work with a person appointed to have control of all lifting operations.
- Provision of foundations suitably designed and constructed to carry dead loads and live load reactions (these are available from Mabey Hire Limited on request).
- Provision of all setting out, i.e. centre lines, bearing centres, and levels as required.
- The design, supply and fixing of all holding down bolts, and grout in accordance with foundation designers instruction.
- Diversion, removal or isolation of services preventing safe erection of the bridge.
- Provision of suitable area to store equipment.
- Provision of a suitable crane, with a person appointed to have overall control and responsibility of the lift in accordance with BS7121, of sufficient capacity to lift and place the Quick Bridge units complete with a C.P.C.S. trained operator. Details of the craneage assessment (including assessment of suitability of ground for outrigger pressures) to be issued to the Construction Supervisor.
- Provision of suitable lifting chains of correct specification and with current test certificates (refer to details on page 3).

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- i. Provision of experienced labour equipped with all necessary safety clothes. i.e. hard hat safety boots etc. (note that on live highway contracts, high visibility coats to BS6629, and on BR contracts, orange waistcoats are required to be worn).
- j. The provision of traffic management should be arranged to ensure adequate access and egress, and a safe working environment for the site crew.
- k. The Hirer should ensure that access routes and working areas are not impeded by other site activities and the construction area is free from all other personnel not involved in the construction of the Mabey system.
- l. Assessment of the site in accordance with COSHH regulations, any substances hazardous to health identified in time for suitable precautions to be arranged.

3. RECEIPT OF GOODS

On arrival of Quickbridges: -

- a. Construction Supervisor should brief all labour involved with the erection of the bridge including checking of crane operator and test certificates of all lifting tackle.
- b. Set up crane on suitable ground with due consideration to working radii, attach appropriate 4 leg chains/slings.
- c. Provide access to sling parts from wagon (do not move wagon unless load is secured).

4. ERECTION

- a. Bearing plates/seating strips should be placed onto foundations.
- b. Rubber bearing pads to be placed onto bearing plates. The bearings should be clean and free from debris.
- c. If timber foundations are being used, these should be suitably designed, in place and stable.
- d. Ensure slinger is clear of lift, use tail ropes to stabilise load.
- e. If necessary stockpile parts where they are accessible (take care to note deck sequence and stack accordingly). Avoid double handling.
- f. Lift the deck units into place.
- g. When the decks are handled, there should be an erector at each end to guide the units onto the bearings. Care must be taken to avoid trapping limbs or fingers. Avoid handling the side edge of the decks when placing adjacent units.
- h. When the units are correctly positioned, the lifting eye covers must be fitted into position.
- i. Repeat for additional units.
- j. Fix holding down bolts in accordance with foundation designers instructions.
- k. Construct ballast walls, fill ramps and fix signing as necessary.

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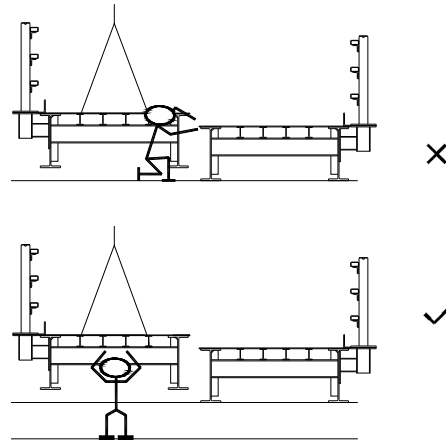
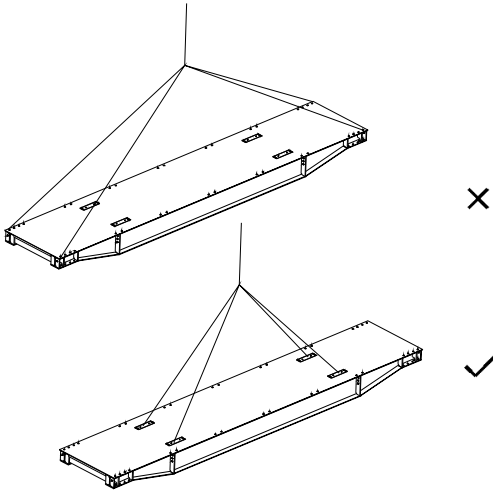
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USE LIFTING POINTS PROVIDED

**DO NOT GET TRAPPED BETWEEN DECKS &
DO NOT STAND UNDER THE LOAD**



5. STANDARD LIFT PLAN

All lifting operations are to be controlled by an “appointed person” in accordance with BS7121 and “Lifting Operations and Lifting Equipment Regulations 1998”.

For standard lifts, the following sample plan should be used:-

- A plan on the crane layout and lifts should be provided by the hirer. The ground must be checked as suitable for the outrigger loadings of the crane during the lift (crane hire companies will supply this).
- Assess the weight of the load (refer to Quick Bridge weights detailed below), and select appropriate slinging tackle (refer to typical chain and hook sizes detailed below).
- Check the anticipated path of the load ensuring there are no obstructions and the load is not lifted above other workers.
- Confirm the capacity of the crane at the required radius prior to lifting (ensure that the weight of the hook block and lifting tackle is accounted for in the lift weight.)

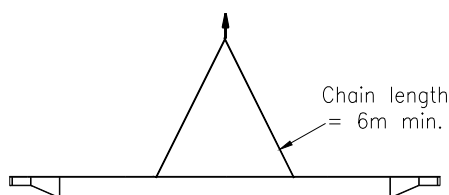
Quickbridge Weights*	Weight of Basic Unit plus anti/skid surfacing	Weight including parapet and kerbs
12m (QB8)	5.45 tonnes	6.20 tonnes
12m (QB9)	6.15 tonnes	6.90 tonnes
12m (QB10)	6.30 tonnes	7.50 tonnes

* The later NQB012 12m Quickbridge units are heavier than the QB8, 9 & 10.
Please refer to separate guide.

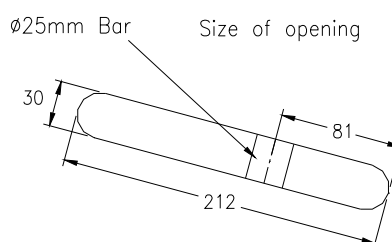
Typical lifting tackle to use when lifting in the QB8, 9,10, 12m Quickbridges.

The tackle and crane hook **must** have sufficient Safe Working Load capacity.
Chains are normally used although it is acceptable to use soft slings. It is essential to ensure that the hook or sling will fit around the bar and fit into the width of the slot provided in the Quickbridge unit.
See details below. The minimum leg length shown below must be adhered to.

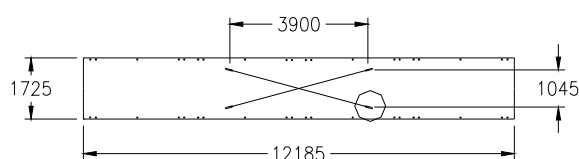
Hook Size: Hooks supplied with 10mm chain **must** be used.
eg. KC10N, or KH10. **(Larger chains and hooks are unlikely to fit.)**



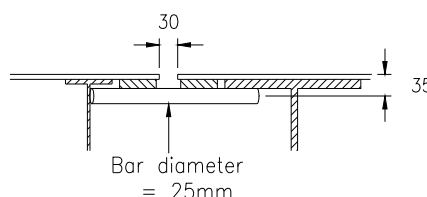
**ELEVATION OF 12m (QB8, 9, 10)
QUICKBRIDGE LIFT**



**PLAN ON LIFTING POINT WITH
COVER OFF**



PLAN SHOWING LIFTING POSITIONS



SECTION THRO LIFTING POINT

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RISK ASSESSMENT SUMMARY

It is a requirement under the Construction Design & Management Regulations that the hirer carries out Risk Assessments for all activities. (Refer to separate document for Design Risk guidance.) The following risk assessment has been produced to assist the hirer in his obligations under the regulations.

It is suggested that the hirer completes the boxes for frequency, severity and rating. Blank spaces overleaf should be used to add site specific and other additional items requiring assessment.

No	Task	Potential Hazard	Likely Harm/Injury	Factors Increasing Risk	Measures to decrease risk	Freq	Sev.	Rating
1	General	Working over water	Drowning	Height	Wear life jackets/safety harnesses Use safety boat, identify non swimmers			
2	General	Bad light	Trapped limbs	Insufficient/badly positioned flood lights	Use sufficient lighting for all operations			
3	General	Fatigue	Falling/trapped limbs	Bad light	Restrict working hours to 12 hours with adequate breaks			
4	General	Ice	Falling	Wind	Wear PPE and monitor access conditions Stop work ice causing slippery steel			
5	Safety of Public	Falling	Broken Bones	Poor protection	Main Contractor to fence site off			
6	Craneage set-up & general usage	Insufficient capacity or limited control	Crushing/death	Crane unsuitable for task. Test certificates out of date	Cranes and lifting tackle to be planned by appointed person. Advise supervisor of appointed person prior to work commencing			
7	Craneage set-up & general usage	Swinging loads	Crushing/trapped limbs	Wind	Use guy lines on larger lifts			
8				Excessive Wind	Stop Work			
9	Craneage set-up & general usage	Falling items	Head injury /trapped limbs	Unsafe slinging	Use correct lifting tackle/competent erectors. Wear PPE, do not stand under load			
10	Craneage set-up & general usage	Services	Electrocution /explosion	Unknown location	Confirm position & ensure client diverts/isolate			
11	Delivery/ collection of stores	Bad access causing vehicle instability	Crushing	No site access	Confirm access suitable for vehicles & crane Use a banksman to direct wagons			
12	Delivery/ collection of stores	Reversing vehicle	Crushing	Bad visibility	Use banksman Stand clear of all vehicles			

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No	Task	Potential Hazard	Likely Harm/Injury	Factors Increasing Risk	Measures to decrease risk	Freq	Sev.	Rating
13	Delivery & unloading of stores	Poor loading of wagon	Crushing/trapped limbs	Instability	Use competent person to load/be aware that crane or forklift may be used to unload Band small items/use skips/cases			
14	Unloading/loading of stores	Poor stacking on ground	Crushing/trapped limbs	Bad ground/poor timbers	Have proper lay down area for stores Use competent erectors			
15	Unloading/loading of stores	Access to sling	Falling	Instability	Use ladders Stand clear of lift			
16	Placing of seating strips	Falling items	Head injury/trapped limbs	Unsafe slinging	Use nylon slings to lift/competent erectors Wear PPE			
17	Placing of seating strips	Positioning brgs/seating strips	Trapped fingers	Swinging load	Use competent erectors/control lift Use bars to move seating plate			
18	Lifting & placing of QB units	Swinging loads	Crushing/trapped limbs	Wind	Use guy lines			
19				Excessive wind	Stop work			
20	Lifting & placing of QB units	Instability	Crushing	Bad ground conditions	Confirm ground suitable for outrigger load			
21	Lifting & placing of QB units	Failure	Crushing/trapped limbs	Insufficient maintenance	Check certs. For crane, lifting tackle & driver.			
22	Lifting & placing of QB units	Overturning	Crushing	Unknown load weight	Confirm load weight with design spec Trial lift			
23	Lifting & placing of QB units	Overturning	Crushing	Unknown radius	Measure radius Jib out to point of lift			
24	Lifting & placing of QB units	Landing units on bearings	Trapped fingers	Moving load	Use guy lines, competent erectors, and bars for positioning.			
25				Excessive wind	Stop work			
26	Lifting & placing of QB units	Landing units at an angle	Crushing/trapped limbs	Swinging load/unstable lift	Use guy lines/trial lift Use chains with clutch			
27	Fitting sundry items	Manual handling	Strained muscles, trapped fingers	Unknown weight, Awkward lift	Use crane wherever possible Manual handling assessment			
28	Fitting sundry items	Over reaching	Strained muscles/back	Falling	Use competent erectors, wear safety harnesses			

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No	Task	Potential Hazard	Likely Harm/Injury	Factors Increasing Risk	Measures to decrease risk	Freq	Sev.	Rat-ing
Space for site specific assessment by hirer:-								

Mabey Hire Ltd.

Bridge House,

Strange Road,

Garswood,

Wigan,

WN4 0RX

Tel: 01942 725343

Fax: 01942 270893

<http://www.mabeyhire.co.uk/>